## Amendments to the Claims:

Please cancel Claim 13.
Please add Claims 14 and 15.

The Claim Listing below will replace all prior versions of the claims in the application:

## Claim Listing:

- (Currently amended) A process comprising the step of reacting a macrocyclic compound characterized by at least two nucleophilic moieties with a <u>bifunctional</u> bridging component <u>characterized by its ability to form π-allyl metal complex</u> optionally in the presence of catalyst thereby achieving a bridged macrocyclic product.
- 2. (Original) The process of claim 1, wherein the macrocyclic compound is a macrolide antibiotic.
- 3. (Original) The process of claim 1, wherein the macrocyclic compound is an erythromycin derivative.
- 4. (Original) The process of claim 3, wherein the erythromycin derivative is azithromycin, desmethyl azithromycin, roxithromycin, clarithromycin, telithromycin, or cethromycin.
- 5. (Original) The process of claim 1, wherein the macrocyclic compound is selected from:

Page 2 of 11

Page 3 of 11

PAGE 5/15 \* RCVD AT 3/20/2006 3:32:16 PM [Eastern Standard Time] \* SVR:USPTO-EFXRF-3/20 \* DNIS:2738300 \* CSID: \* DURATION (mm-ss):04-24

wherein

D is selected from  $-NHCH_2$ -,  $-NHCHR_1$ -,  $-NHCR_3R_4$ -,  $-NR_1CH_2$ -, -NHC(O)-, -NHC(S)-, or  $-NR_1C(S)$ -;

Each R<sub>1</sub> is independently selected from hydrogen, deuterium, a substituted or unsubstituted, saturated or unsaturated aliphatic group, a substituted or unsubstituted, saturated or unsubstituted group, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, saturated or unsaturated heterocyclic group;

R<sub>3</sub> and R<sub>4</sub> is independently selected from the group consisting of hydrogen, acyl, a substituted or unsubstituted, saturated or unsaturated aliphatic group, a substituted or unsubstituted aromatic group, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, saturated or unsaturated heterocyclic group; or can be taken together with the nitrogen atom to which they are attached to form a substituted or unsubstituted heterocyclic or heteroaromatic ring;

L is selected from hydrogen, a substituted or unsubstituted, saturated or unsaturated aliphatic group, a substituted or unsubstituted, saturated or unsaturated

alicyclic group, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, or a substituted or unsubstituted heterocyclic group;

one of U or V is hydrogen and the other is independently selected from the group

consisting of:  $R_1$ ,  $OR_1$ ,  $OC(O)R_1$ ,  $OC(O)NR_3R_4$ ,  $S(O)_0R_1$ , carbohydrate or sugar moiety;

or U and V, taken together with the carbon atom to which they are attached, are C=O:

or UV and  $R_0R_1$ , taken together with the carbon atoms to which they are attached, are  $-C(R_1)$ -CH-;

one of J or G is hydrogen and the other is selected from: R1, OR1, or NR3R4;

or J and G, taken together with the carbon atom to which they are attached, are selected from: C=O, C=NR<sub>1</sub>, C=NOR<sub>1</sub>, C=NO(CH<sub>2</sub>)<sub>m</sub>R<sub>1</sub>, C=NNHR<sub>1</sub>, C=NNHCOR<sub>1</sub>, C=NNHCOR<sub>1</sub>, C=NNHCONR<sub>3</sub>R<sub>4</sub>, C=NNHS(O)<sub>m</sub>R<sub>1</sub>, or C=N-N=CHR<sub>1</sub>;

 $R_a$ ,  $R_b$ ,  $R_c$ , and  $R_d$  are independently selected from  $-R_1$ ,  $-OR_1$ ,  $-S(O)_nR_1$ ,  $-C(O)OR_1$ ,  $-OC(O)OR_1$ ,  $-OC(O)OR_1$ ,  $-C(O)NH-R_1$ ,  $-NHC(O)-R_1$ ,  $-N(R_3)(R_4)$ ,  $-NHC(O)-OR_1$ ,  $-NHC(O)NH-R_1$ , or  $-OC(O)NH-R_1$ ;

or R<sub>a</sub> and R<sub>b</sub>, R<sub>a</sub> and R<sub>c</sub>, R<sub>a</sub> and R<sub>d</sub>, R<sub>b</sub> and R<sub>c</sub>, R<sub>b</sub> and R<sub>d</sub>, or R<sub>c</sub> and R<sub>d</sub>, taken together with the carbon atom or atoms to which they are attached, are selected from substituted or unsubstituted alicyclic or substituted or unsubstituted heterocyclic;

one of  $R_e$  and  $R_f$  is selected from hydrogen or methyl, and the other is independently selected from halogen, deuterium, or  $R_1$ .

 $R_h$  is hydroxy;

R<sub>g</sub> is selected from hydrogen, a substituted or unsubstituted, saturated or unsaturated aliphatic group, a substituted or unsubstituted, saturated or unsaturated alicyclic group, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, or a substituted or unsubstituted heterocyclic group;

or  $R_g$  and  $R_h$ , taken together with the carbon atom to which they are attached, are selected from an epoxide, a carbonyl, a substituted or unsubstituted olefin, a substituted or unsubstituted alicyclic, a substituted or unsubstituted heterocyclic;

W is NR<sub>3</sub>R<sub>4</sub>;

one of X and Y is hydrogen, substituted or unsubstituted aliphatic, and the other is independently selected from: hydroxy, -SH, -NH<sub>2</sub>, or -NR<sub>1</sub>H;

or X and Y, taken together with the carbon atom to which they are attached, are selected from: C=O, C=NR<sub>1</sub>, C=NOR<sub>1</sub>, C=NO(CH<sub>2</sub>)<sub>m</sub>R<sub>1</sub>, C=NNHR<sub>1</sub>, C=NNHCOR<sub>1</sub>, C=NNHCONR<sub>3</sub>R<sub>4</sub>, C=NNHS(O)<sub>n</sub>R<sub>1</sub>, or C=N-N=CHR<sub>1</sub>;

 $R_p$  is selected from hydrogen, acyl, silane, or a hydroxy protecting group;  $X_H$  is selected from hydrogen or halogen; m is an integer; and n is 0, 1, or 2.

- 6. (Currently amended) The process of claim [[4]]5, wherein, for the macrocylic compound, L is ethyl.
- 7. (Currently amended) The process of claim [[4]]5, wherein, for the macrocylic compound, one of X and Y is hydrogen and the other is selected from hydroxy or amino.
- 8. (Currently amended) The process of claim [[4]]5, wherein, for the macrocylic compound, X and Y, taken together with the carbon atom to which they are attached, are selected from the group consisting of: C=O, C=NH, C=N-OH, or C=N-NH<sub>2</sub>;
- (Currently amended) The process of claim [[4]]5, wherein, for the macrocylic compound, R<sub>g</sub> is methyl.
- 10. (Currently amended) The process of claim [[4]]5, wherein, for the macrocylic compound,  $R_c$  is hydrogen and  $R_f$  is selected from methyl, allyl, or propargyl.

- 11. (Currently amended) The process of claim [[4]]5, wherein, for the macrocyclic compound, one of U and V is hydrogen and the other is selected from -OH or -O-cladinose.
- 12. (Currently amended) The process of claim [[4]]5, wherein, for the macrocylic compound, U and V, taken together with the carbon atom to which they are attached, are C=O.
- 13. (Cancelled)
- 14. (New) A process comprising the step of reacting a macrocyclic compound characterized by at least two nucleophilic moieties with a bifunctional bridging component in the presence of a palladium catalyst thereby achieving a bridged macrocyclic product.
- 15. (New) A process comprising the step of reacting a macrocyclic compound characterized by at least two nucleophilic moieties with a bifunctional bridging component characterized by at least two leaving groups in the presence of catalyst thereby achieving a bridged macrocyclic product.